Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>22 February 2006</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1.   Claims 10-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Izumi

(US Patent NO. 6,219,021).

As to claim 10, Izumi teaches display device having a back light (See Col. 1,

Lines 35-43), said display device comprising:

an extracting means for extracting from a user program addressed to said

display device a control command (in the reference extracting means extracting an

illumination time period setting table ... for every application)(See Col. 5, Lines 3-5) for

switching on and off said back light (See Fig. 9, items S53-S59, Col. 11, Lines 23-26

and Col. 5, Lines 6-10), said user program including a message to be displayed on said

display device (See Col. 5, Lines 18-20) and said control command (in the reference

backlight illumination instructions)(See Col. 5, Lines 3-10); and

a control means for controlling switching on and off of said back light (See

Fig. 9, items S53-S59,TM1-TM2, Col. 11, Lines 23-26) according to said control

command extracted by said extracting means (in the reference extracting means

extracting an illumination time period setting table ... for every application)(See Col. 5,

Lines 3-5).

As to claims 11-12, Izumi teaches an extracting means for extracting from a user

program addressed to said display device a control command (in the reference

extracting means extracting an illumination time period setting table ... for every

application)(See Col. 5, Lines 3-5) for switching on and off said back light (See Fig. 9,

items S53-S59, Col. 11, Lines 23-26 and Col. 5, Lines 6-10), said user program

including a message to be displayed on said display device (See Col. 5, Lines 18-20)

and said control command (in the reference backlight illumination instructions)(See Col.

5, Lines 3-10).

As to claim 13, Izumi teaches a system program memory ROM 6 that stores a

system program for the CPU 5; and a user program memory RAM 7 which is different

from the ROM 6 and stores the user program (table changing and setting by the user)

(figure 3 at 5-7, column 6, lines 38-43 and column 7, lines 9-20).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-9, 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Izumi in view Hiroyuki (Japanese Patent Publication No. 2000-242315 provided by

the Applicant).

Regarding **independent claim 1,** Izumi teaches a method of controlling a

backlight of a display device by teaching a display control device which allows reduction

of power consumption by a backlight when data such as textual data or drawing data is

displayed on a display panel with the backlight on, by changing display form of data for

improving visibility of the data on a display (column 2, lines 42-49). Furthermore, Izumi

teaches how to provide at least one display setting group including a message to be

displayed by teaching a display control device comprising a display panel for displaying

data containing textual and/or drawing data; a display buffer for storing data to be

displayed on the display panel; a display control section for controlling display of the

display panel; a backlight for illuminating the display panel; an illumination instruction

section for outputting a backlight illumination instruction; and an illumination control

section for controlling the illumination of the backlight according to the backlight

illumination instruction from the illumination instruction section, wherein the display

control section changes a display configuration of the data to be displayed on the

display panel when the illumination instruction section outputs the backlight illumination

instruction (column 2, lines 50-62).

Furthermore, Izumi teaches a display panel for displaying data containing at least

one of textual and drawing data, a display buffer for storing the data to be displayed on

the display panel, a backlight for illuminating the display panel and an illumination

instruction section for outputting a backlight illumination instruction, wherein the

computer program performing the functions of: causing a computer operation to control

illumination of the backlight according to the backlight illumination instruction from the

illumination instruction section; causing a computer operation to control display of the

display panel; and causing a computer operation to change a display configuration of

the data from a first configuration to a second configuration to be displayed on the

display panel when the illumination instruction section outputs the backlight illumination

instruction, wherein said second configuration enables a reduction in time needed to

view said data as compared to said first configuration in order to reduce illumination

time and corresponding battery consumption; and providing an illumination time period

setting table storing a backlight illumination time period per one character and

calculating an illumination time period corresponding to the number of characters of the

data to be displayed on the display panel by reference to the illumination time period

setting table, wherein when the illumination instruction section outputs the backlight

illumination instruction, the illumination of the backlight is controlled according to the

calculated illumination time period (column 13, lines 40 through column 14, lines 31).

Furthermore, Izumi teaches the illumination time of backlight changing and setting

by user and store in the RAM (figure 3 at 5-7, column 10, lines 63-67 and column 11,

lines 12-17).

Izumi does not expressly teach that the controller for specifying parameter is a

programmable controller, which cyclically executes a user program.

However, Hiroyuki teaches a programmable controller system equipped with the

programmable controller (12) where the I/O comment for the maintenance of a program

is written to a memory in combination by a support tool and the setting display unit (10)

equipped with display part (13) which is connected to the programmable controller (12)

and sets data regarding a control state and an operation state in association with its

control contents; and the setting display unit (10) inputs the character string of the I/O

command from the programmable controller (12) and display it on the display part (13)

(abstract), which cyclically executes a user program (in the reference actuation multiple

times changes to the desired content of display) (See Drawing 1, items 13a-13b, 14b,

paragraph 0014).

Therefore, it would have been obvious to a person of ordinary skill in the art at the

time the invention was made to include the teaching of Hiroyuki, having programmable

controller to be incorporated to Izumi's device so as motivated by Hiroyuki, to lighten the

burden on a screen designer of the setting display unit and to evade parameter

misalteration by an operator by eliminating the need of screen generation on a setting

display unit side.

Regarding **independent claim 4,** Izumi teaches a method of controlling a

backlight of a display device by teaching a display control device which allows reduction

of power consumption by a backlight when data such as textual data or drawing data is

displayed on a display panel with the backlight on, by changing display form of data for

improving visibility of the data on a display (column 2, lines 42-49) said method

comprising the steps of:

providing at least one display setting group including a message to be displayed

by teaching a display control device comprising a display panel for displaying data

containing textual and/or drawing data; a display buffer for storing data to be displayed

on the display panel; a display control section for controlling display of the display panel;

a backlight for illuminating the display panel; an illumination instruction section for

outputting a backlight illumination instruction; and an illumination control section for

controlling the illumination of the backlight according to the backlight illumination

instruction from the illumination instruction section, wherein the display control section

changes a display configuration of the data to be displayed on the display panel when

the illumination instruction section outputs the backlight illumination instruction (column

2, lines 50-62).

Furthermore, Izumi teaches a display panel for displaying data containing at least

one of textual and drawing data, a display buffer for storing the data to be displayed on

the display panel, a backlight for illuminating the display panel and an illumination

instruction section for outputting a backlight illumination instruction, wherein the

computer program performing the functions of: causing a computer operation to control

illumination of the backlight according to the backlight illumination instruction from the

illumination instruction section; causing a computer operation to control display of the

display panel; and causing a computer operation to change a display configuration of

the data from a first configuration to a second configuration to be displayed on the

display panel when the illumination instruction section outputs the backlight illumination

instruction, wherein said second configuration enables a reduction in time needed to

view said data as compared to said first configuration in order to reduce illumination time and corresponding battery consumption; and providing an illumination time period setting table storing a backlight illumination time period per one character and calculating an illumination time period corresponding to the number of characters of the data to be displayed on the display panel by reference to the illumination time period setting table, wherein when the illumination instruction section outputs the backlight illumination instruction, the illumination of the backlight is controlled according to the calculated illumination time period (column 13, lines 40 through column 14, lines 31).

Furthermore, Izumi teaches the illumination time of backlight changing and setting by user and store in the RAM (figure 3 at 5-7, column 10, lines 63-67 and column 11, lines 12-17).

Izumi does not expressly teach that the controller for specifying parameter is a programmable controller, which cyclically executes a user program.

However, Hiroyuki teaches a programmable controller system equipped with the programmable controller (12) where the I/O comment for the maintenance of a program is written to a memory in combination by a support tool and the setting display unit (10) equipped with display part (13) which is connected to the programmable controller (12) and sets data regarding a control state and an operation state in association with its control contents; and the setting display unit (10) inputs the character string of the I/O command from the programmable controller (12) and display it on the display part (13) (abstract), which cyclically executes a user program (in the reference actuation multiple

times changes to the desired content of display) (See Drawing 1, items 13a-13b, 14b,

paragraph 0014).

Therefore, it would have been obvious to a person of ordinary skill in the art at the

time the invention was made to include the teaching of Hiroyuki, having programmable

controller to be incorporated to Izumi's device so as motivated by Hiroyuki, to lighten the

burden on a screen designer of the setting display unit and to evade parameter

misalteration by an operator by eliminating the need of screen generation on a setting

display unit side.

Regarding **independent claim 7,** Izumi teaches a controller having a display

device having a backlight of a display device by teaching a display control device which

allows reduction of power consumption by a backlight when data such as textual data or

drawing data is displayed on a display panel with the backlight on, by changing display

form of data for improving visibility of the data on a display (column 2, lines 42-49).

Furthermore, Izumi teaches how to provide an extracting means for selectively

specifying one of at least one display setting group data including a message to be

displayed by teaching a display control device comprising a display panel for displaying

data containing textual and/or drawing data; a display buffer for storing data to be

displayed on the display panel; a display control section for controlling display of the

display panel; a backlight for illuminating the display panel; an illumination instruction

section for outputting a backlight illumination instruction; and an illumination control

section for controlling the illumination of the backlight according to the backlight

illumination instruction from the illumination instruction section, wherein the display

control section changes a display configuration of the data to be displayed on the

display panel when the illumination instruction section outputs the backlight illumination

instruction (column 2, lines 50-62).

Furthermore, Izumi teaches a display panel for displaying data containing at least

one of textual and drawing data, a display buffer for storing the data to be displayed on

the display panel, a backlight for illuminating the display panel and an illumination

instruction section for outputting a backlight illumination instruction, wherein the

computer program performing the functions of: causing a computer operation to control

illumination of the backlight according to the backlight illumination instruction from the

illumination instruction section; causing a computer operation to control display of the

display panel; and causing a computer operation to change a display configuration of

the data from a first configuration to a second configuration to be displayed on the

display panel when the illumination instruction section outputs the backlight illumination

instruction, wherein said second configuration enables a reduction in time needed to

view said data as compared to said first configuration in order to reduce illumination

time and corresponding battery consumption; and providing an illumination time period

setting table storing a backlight illumination time period per one character and

calculating an illumination time period corresponding to the number of characters of the

data to be displayed on the display panel by reference to the illumination time period

setting table, wherein when the illumination instruction section outputs the backlight

illumination instruction, the illumination of the backlight is controlled according to the

calculated illumination time period (column 13, lines 40 through column 14, lines 31).

Furthermore, Izumi teaches the illumination time of backlight changing and setting by user and store in the RAM (figure 3 at 5-7, column 10, lines 63-67 and column 11, lines 12-17) which is different from a system program memory (figure 3 at 6).

Izumi does not expressly teach that the controller for specifying parameter is a programmable controller, which cyclically executes a user program.

However, Hiroyuki teaches a programmable controller system equipped with the programmable controller (12) where the I/O comment for the maintenance of a program is written to a memory in combination by a support tool and the setting display unit (10) equipped with display part (13) which is connected to the programmable controller (12) and sets data regarding a control state and an operation state in association with its control contents; and the setting display unit (10) inputs the character string of the I/O command from the programmable controller (12) and display it on the display part (13) (abstract), which cyclically executes a user program (in the reference actuation multiple times changes to the desired content of display) (See Drawing 1, items 13a-13b, 14b, paragraph 0014).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Hiroyuki, having programmable controller to be incorporated to Izumi's device so as motivated by Hiroyuki, to lighten the burden on a screen designer of the setting display unit and to evade parameter misalteration by an operator by eliminating the need of screen generation on a setting display unit side.

Regarding **claims 2, 5, 8, in further** discussion of claims 1, 4, 7, Izumi teaches how the user program is stored in ROM 6 which is different from a system program memory (RAM 5) that stores a system program for the programmable controller represented by CPU 5 (figure 3 at 5-7, 13, column 6, lines 38-43).

Regarding claims **3, 6, 9**, in further discussion of claims 1, 4, 7, Izumi teaches a display control device includes a display panel for displaying data containing textual and/or drawing data, a display buffer for storing data to be displayed on the display panel, a **display control section** for controlling display of the display panel, a backlight for illuminating the display panel, an illumination instruction section for outputting a backlight illumination instruction, and an illumination control section for controlling the illumination of the backlight according to the backlight illumination instruction from the illumination instruction section wherein the display control section changes a display configuration of the data to be displayed on the display panel when the illumination instruction section outputs the backlight illumination instruction (see Abstract). Furthermore, Izumi teaches how a timer is used to determine whether the backlight is switched on or off (figure 5 at S29-S32).

Regarding **claim 14,** in further discussion of claim 4, Izumi teaches how the control command is provided to a display command that is a command to display as the message a specified data item in the user program (column 2, lines 50-63).

Regarding **claim 15,** since Hiroyuki shows a programmable controller, then it is inherent that the user would be able to modifying the user program.

Response to Arguments

3.   Applicant's amendments and arguments with respect to claims 1-15 have been

have been fully considered but they are not persuasive:

On page 6, 4th paragraph of Remarks, Applicant stated that in case of small

portable electronic systems addressed by Isumi reference , key operations and button

inputs are generally recognized by the system program through an interrupt. However

Hiroyuki reference which uses PLC, which cyclically executes a user program (in the

reference actuation multiple times changes to the desired content of display) (See

Drawing 1, items 13a-13b, 14b, paragraph 0014).

Telephone Inquire

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Leonid Shapiro whose telephone number is 571-272-

7683. The examiner can normally be reached on 8 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Bipin Shalwala can be reached on 571-272-7681. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

LS
04.04.06

BIPIN SHALWALA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600